

I felt very good after the lecture last time because I thought the questions were extremely good. I understand that there were some people who felt some of the questions had not been answered which dismayed me. I did feel at the end of it actually that I would have done better to answer them one by one. I know I didn't get to the point of what should we do on program. And let me say that at least briefly today before we're through. So this time if you don't hear that wave your arms and stamp and burn paper and things. Have a riot. Leaving enough time for me to do that. So make sure I do it.

Aside from that. A point. I would like to see other people who asked questions last time since they were all very good who aside from that point, felt their questions had not been answered. Could I see hands? I don't see anybody. Could I see hands? I was going to say if there were any I would be glad to hear that question again at the break to start out the questions with. And I do want to take the second half here then after the break to deal with questions one by one. And I congratulate you on last week's questions and I hope we keep up the same standard. Let me see if I can...

Also today I want to run over again before the night is finished, some comments at least on several of the readings. Some you've had and some that are coming up on this test, to give you a sense of how they fit in to the grand scheme. To give you a quote from a statement by Harold Braun, former Director of Livermore Labs, former Director of Research and Engineering in the State Department—in the Defense Department—and then Secretary of Defense under Carter. His comment on the Scowcroft

Commission Report with which he basically agreed. The Scowcroft Commission Report is on your reading. I don't think the Braun comment is, is that right? That would have been good to put on. But at any rate, the first sentence—you understand that the MX was proposed by Braun, basically, and Carter, and they explored a number of different basing modes. The number 34 is sometimes given. I think it's got to be more than that eventually.

Can you hear me all right back there? No? How's this, is that better? You don't have a thing with a longer cord on it somewhere do you? Yeah, OK. The various different launching modes you'll recall were considered—putting in underground tunnels, in deep trenches, moving it around from shelter to shelter, having a number of separate shelters for each MX missile to provide a number of targets for the others. In the end Reagan chose an approach on the recommendation of the Scowcroft Commission, putting the MX in Minuteman silos. I'm going to start out tonight with something that's going to look fairly abstract. Those of you who are, what's the expression now, who have an aversion to mathematics of symbolism of any kind, I ask you not to panic. You are not going to be tested on any of this formal framework. Get from it what you can. Some will get more than others. And I will put it all into words before we're through. But it's a little apparatus that I think will be suggestive to more than a few of you. And also it will repay some of the time that we spent on the blackmail diagrams. I know there are differing attitudes I've heard of time spent on that. But really I spent as much time as I did in hopes that I could apply it to the problem

that we are going to look at tonight so you have a little background on that.

The question is how you evaluate weapons systems individually—their effect on our strategic posture, their effect on our security from various objectives. And how to reach some judgment as to what the impact is of a given change in what the Defense Department calls 'our posture' which comprises the types of weapons, the way they are deployed, the training that goes with them. And it may or may not include such matters as doctrine and threats.

All right. I want to plunge right into this. Harold Braun starts his comment on the Scowcroft Commission Report having endorsed the notion of putting these things in fixed silos as opposed to any of the methods he had endorsed when he was Secretary of Defense with this statement. "The purpose of U.S. strategic nuclear forces is deterrence of attack against the United States or our allies." There is more content in that statement and it raises more problem than may appear at first hearing.

Let's take first the issue of deterring attack on the United States. The Soviet Union has a couple of choices let's say at any given time. Launch a first strike. I'll call that STRIKE. And anything else. I'll give it a representative name. We'll just call it WAIT. That means don't strike. Anything but launching an allout first strike. The best thing. To start out with let's assume PEACE, such as it exists today whatever form that is. The problem here is to make it the work of a madman—clinical madman—ever for the Soviet Union to strike the United States.



It's understood, at least the American people tend to believe, that the single purpose of our strategic forces is really to deter attack on the United States. They might not have added that phrase on the allies and I'll come back to that. That means that the outcome you are trying to effect the calculated deliberate action of a Soviet leader under any kind of circumstances. You are trying to effect then a rational action just in the sense of an action that is deliberated, that's calculated. It is based on looking at alternatives and their consequences and you want to effect the Soviets. Obviously this is an enormous abstraction here, we are treating this as if it were a person—the Soviet Union. But to start with a Soviet leader. You want to affect that Soviet leader's decision against this choice for a first strike against the United States under any circumstances—whatever the alternatives are.

Let's say, then, that I'll give an arbitrary (again, this is where is gets suggestive for you) I'll give an arbitrary index of the outcome here which is going to indicate the preferences among outcomes, which he prefers, and the kind of gambles that such a leader might be willing to take as roughly as we can estimate them. If we just arbitrarily put a 0 for the index for the outcome to say PEACE. And you'll think of all...don't worry about the objections that may arise to your mind on this simplification. See as it goes along if it's suggestive or not.

We want this to look a lot worse than WAIT under all circumstances to deter it by the use of our strategic forces. We want to assure him then that we will retaliate in such a way no matter how he attacked under his best conceived first strike, that the outcome here will be say, very



bad. Something like that. That shouldn't seem so hard to do in the period throughout this entire period. Obviously when we had a monopoly the issue of first strike did not arise. But as soon as the Soviets got some delivery capability (which didn't even begin to get significant until the 1950s against the United States).

We always had the capability of launching an immense strike. Say the Soviets had launched the 194 bombers that they had in 1961 against us. Some of those undoubtedly could have gotten through. Or would have had a good chance of getting through if they had launched a first strike. They are still flying the same intercontinental bombers, by the way. Not refurbished in the way that our B-52s have been rebuilt almost entirely. And they are now down to about 130 or 140 of those same bombers.

Now, of course, they have lots of missiles. But say in those days they had launched a strike with that and, let's say, their 4 ICBMs (of which maybe one or two may have gotten off in terms of reliability). They could have killed a lot of Americans in doing that. On the other hand, they would hardly have reduced at all our bomber force, either tactical or strategic of which we had 3,000 bombers as I've said. 2,000 intercontinental and 1,000 tactical. Now that's the whole inventory. But allowing just for the ones on alert (on ten minute alert at that time) hundreds and hundreds, many hundreds of bombers would have gotten off and had the capability to annihilate the Soviet Union.

And those of you who have looked at my comments on the basic national security policy or heard my first lecture, will recall that our calculation of what the Soviets would suffer if their plans went off as

planned was on the order of several hundred million people dead in the Soviet Union. That would not have been reduced at all actually, appreciably by a Soviet first strike. And we would have killed that many in our own first strike (I'll come back to that) because we were targeting cities in either the first or second. So deterrence would seem to have been extremely good.

Why should it ever have gotten any worse, if it has, or why should it ever be different from that? Well the Soviets now have enormous numbers of missiles. By ten years later, let's say around 1970, they had going on 1200 or so, eventually 1400 Soviet missiles so they didn't yet mervue their missiles. Nevertheless their missiles did not have the accuracy or the warhead yield to be able with any reliability to destroy our hardened Minutemen missiles. So going first again they would not have reduced what we could do to them. And what we could do to them was annihilate them. There was essentially no limit.

So this looks like basically a very simple problem. The point was made in one of the articles on your reading then by Albert Wohlstetter in "The Delicate Balance of Terror" article and made elsewhere that there is and nevertheless remains, a couple of circumstances in which the Soviets might, under some circumstances, launch a first strike. One of those, I think, was not realistic at the time it turns out but (and I'll come back to that) but is certainly not realistic now. That is, supposing WEIGHT (the alternative to striking for them) was an unusually bad alternative. Say that for instance they were about to lose some major ally. Let's say we invaded Afghanistan and they were about to lose somehow. Or in fact,

suppose that a tactical nuclear war actually was going on at that particular time which would lower this significantly. Let's say it would lower it to 100.

Well, the fact is that looking at what can be done to them if they strike first, it's very, very hard to imagine any circumstance of an uprising in the satellites, of a coup in the Soviet Union, a loss in some crisis of the kind we've confronted them—Quemoy, Cuba, Iran, you name it, Vietnam. It's hard to imagine a loss that would look so bad that striking would look better than that. Actually there is approximately one, a very good approximation, one alternative to striking first that looks actually worse than striking first to the Soviet Union. And that is striking second.

If they were confronting the possibility that if they waited in these circumstances the U.S. might not wait but might actually strike it's a characteristic of the nuclear era that being struck is under almost any circumstances looks enormously worse than striking first. Almost nothing else does in the world. I'm speaking... so let's say it's like this. This difference here... and now these differences begin to be meaningful only when you can look at intervals.

That means that what I've meant by this on the one hand I'm saying that the difference here let's say is though large is less than difference between these two or the difference for that matter here. And operationally I'm interpreting that to mean the following. This would be preferred to this by the Soviet Union unless there were a sufficiently high probability of this outcome. The worse this is (the worse this



looks) the less that probability has to be to make the first strike look even better.

Say this were minus 10,000 relatively speaking. What I would mean by that is that if a (let's say in this case) if a 10% chance roughly of a U.S. strike is enough to make him prefer to strike first to avoid getting this outcome. If I lowered this to say 10,000 what I mean by that is saying it would take less—2%, 3% to get you to do it. It's that threshold idea which I introduced last time. Which again, I can just use the phrase that I used last time—critical risk.

I can ask what is the probability of being struck that would cause the Soviet Union in this case to prefer to strike, to take this outcome rather than this gamble. If he chooses WAIT he may get this outcome whether it's 100 or it might be 0 or he might be winning. He might be winning a limited nuclear war, it might look better. That would incline him to WAIT. The better this gets. But I can ask, then... A property of this set of numbers basically is to suggest an answer to the question in terms of directions. How will his willingness to wait... That's another term for this anyway. How sure does he have to be that he is going to be struck if he waits before he (the Soviet Union institution—complex) chooses to strike?

Now, I'm going to put a couple more elements on this and you'll see what it's worth in a minute. This is just setting it up. Let me use the expression "p" for the probability of a Soviet strike in the eyes of the U.S. Remind you what that means operationally. As Frank Ramsey said, "A probability of one third—a subjective probability—means the kind of

belief, the kind of uncertainty that leads to a bet of 2-1. Related to betting odds of that sort. So it's just a degree of measurement of your own uncertainty. We'll put "q" here for the probability of the U.S. strike in the Soviet eyes.

Now, we could ask in the first place why is  $p$  greater than 0? Why is there any problem of deterrence at all? And the answer that I am implicitly giving here is because in the Soviet eyes  $q$  may be greater than 0. If that weren't the case (and I'm talking now about current conditions and really conditions that have applied pretty much right along) the idea of a Soviet strike was... I would say today, let me assign right today. I have to apologize but this cold is making it very hard for me to think on my feet. It's sort of an ad for a cold. If somebody has a cold remedy I'll be glad to be an ad for a cold remedy. After it will be a dramatic shift. So bear with me.

I'll speak empirically, getting away from this, and then you'll see where this is headed. I would say in fact there is, in my opinion, a positive chance of a Soviet first strike today. Positive—meaning greater than zero. And as I see it, and I'm going to try to explain some of these more or less empirical judgments that I am making in terms of this approach. As I see it, that's a change in the situation. The realities I think, of the situation, have been such that over the last generation since the Second World War, had we known realistically what the balance was at every point, the estimate of the Soviet likelihood of driving a deliberate initiation of nuclear war against the United States was zero. As close to zero as you can imagine.

I think that's changed. And in fact that we do live with some chance of a Soviet first strike. Moreover I think that chance is growing as a direct result of programs we have been involved with in the last few years and will grow further from programs that are now underway, show little signs of abating, and are being pushed at this moment. So I think the chance is likely to be significantly larger by the end of this decade. And obviously that is a very ominous judgment. I hope I am wrong. I could certainly use the hour giving you arguments against what I've said. And I am happy to go into that. And I hope they are right.

But on balance I think the trend is as I've described. If it is true that there is a probability of a Soviet first strike I would say it can only be for one reason. The only reason I think conceivable that the Soviets would launch a first strike (an allout disarming kind of strike against the U.S.) would be if they believed the U.S. might strike them. Only this difference can push them into the vast uncertainties and horrors of launching a first strike as they must see it. Only the fact that waiting could look even worse. And what I am saying is that I think that that difference is growing in fact, that difference between these effects here and the possibility of a U.S. first strike, is alive in their mind. But that is not new. I have to elaborate this a little more.

Why would they suppose that the U.S. would ever strike first? Well, we come back to Harold Brown's point here which is nothing new at all. The purpose of the strategic forces is deterrence of attack against the U.S. or our allies. Now in affect, as Albert Wohlstetter points out in that article, at the point that our strategic force impacts on the Soviet



Union, you are talking in those two circumstances of what amount to two different forces. Wohlstetter called the forces that would be available for retaliating to a Soviet first strike our second strike forces which he pointed out would be those forces which managed to survive a Soviet attack on our own forces.

And not only that (especially in the days of airplanes) they would not only have to survive the initial attack but those airplanes (or say cruise missiles today, bombers today) would have to survive penetrating into the enemy homeland. Moreover they would do so not in a coordinated way, but having been attacked they would do so in a relatively ragged way, coming in sequentially—making it much easier for the Soviet defenses to deal with them.

That is a bit obsolete now that we rely mainly on missiles. There is no longer a penetration problem for the missiles. And it may need saying, neither side has any significant defense whatever against missiles. That may be necessary to mention even for this class. The Soviet Union does have a nominal defense around Moscow only. The only city that they have some defense around. It will not protect Moscow at all from destruction in the event of a war. Otherwise they have no defense means against our missiles at all. We at this point have no defenses at all. So it is no longer a penetration problem.

Nevertheless (going back to establish the principle here) at the time Wohlstetter was writing in '59 and '60 there was a considerable problem. And that would, by the way, still arise again if both sides did violate (or abrogate) the antiballistic missile treaty and install the new

antiballistic missiles, which have considerably more effectiveness (within very sharp limits) than the missiles that were available ten years ago and which we rejected. And so the Reagan Administration is moving considerably—a very large research and development program—toward antiballistic missile programs.

Almost all such defenses will work a great deal better in connection with a first strike than with a second strike. I think I can make the point between these forces a little in that connection. Imagine that there were an antiballistic missile system—whether space-based or land-based—which may come to be the case in ten years or so. The side striking first would be able to hit that antiballistic missile system in a coordinated manner swamping it with decoys. Starting by destroying the command and control system that controlled that system. The radars, the communication links, the satellites that were involved. If there were space battle stations they could attack those space battle stations with weapons which themselves had not yet been attacked. They could almost certainly (as far as we now can conceive) could swamp that system and get through even though it would raise the expenses of their attack for that thing to be in place.

They would not (under any real foreseeable circumstances now or ten years from now) destroy all of our ability to strike back—or even necessarily the greater part of it. Nevertheless what would strike back after achieving that effect would do so not in the planned, coordinated way of the person striking first or the side striking first. Many of the weapons would take a long time to get off. Imagine the problems with our space program.

The problems of getting off a first strike in a coordinated way would be great and it wouldn't be wholly achieved in a totally coordinated way, but the problem of doing that after the missile fields that you were firing from had been subjected to thermonuclear explosions is another problem altogether. Getting through the stems of these thermonuclear clouds, breaking through the debris that would be thrown up on top of the silos and so forth would make the retaliating salvo very ragged. And that means that your space defenses or your land-based defenses at the other end would not be confronted with this enormous cloud of missiles coming all at once (the ideal attack), but more or less one at a time--sequentially. Which would give it much greater ability to deal with that and much (to concentrate its defenses) much less ability to be swamped by decoys. It could discriminate very much better in that case and it would be facing a smaller force than would be launched in the first strike. Is that all clear?

The effect of that almost certainly is that ABM systems would work with some significance (if they were large systems) against a retaliatory attack to cut it down and have very much less likelihood of affecting the outcome of the first strike. Yes?

Q:

Yes, yes, I did. You are talking about the possibility of launch on warning. Yes. That would make a difference. Let me think about it a second on this connection. In that case, then, it's possible that the



first ABM system... let's see. My brain isn't fully up to working this sort of thing at night. Let me put it aside and come back to that. Certainly the possibility of launch on warning is real and something we'll have to figure into this thing later. OK. I want to use some easier examples that I've thought of before. I haven't thought through the ABM thing fully, although it would be a good exercise. For you. If you learn how to do this. Give me your answers. Maybe I can check them.

OK. What Brown has said has the following bearing. As I've said, the only thing that can get the Soviets a reasonable... (something other than a clinically insane leader) to decide to strike first is his apprehension that he's about to strike first—that he will lose his forces if he doesn't use them in the expression. And perhaps lose any chance of (let's not even assume that there is an acceptable chance of winning the war) but that he will do much worse if he waits if the U.S. is in the process of striking.

Why would he ever imagine that we would be in the process of striking? Because (as Brown has pointed out) for the entire period of this generation, the United States has publicly committed itself to doing just that under certain circumstances. Specifically, our NATO commitment (as you'll see in the various articles on our warplans) from the earliest years—even before there was a NATO—our NATO planning has been premised on the notion of a first strike against the Soviet Union in the event of a conventional attack into Europe.

In this case the WAIT here is not so specific. The particular alternative to their striking now is their moving ahead with their

conventional forces. And we have the option of striking those as we have been committed to do, if necessary, or waiting. And in that case the outcome for us (and I'm now going to put, as I did before, our outcomes—the U.S. outcomes—to the left here, I've left a lot of room), our outcome has gone from zero under the Soviet attack to a bad outcome—minus 100—if we don't strike. Under those circumstances we have committed ourselves not to accepting failure, not to accepting stalemate, but to escalating it. As you know in the fifties and early sixties that meant going almost immediately to an allout first strike.

The plans I described—the basic national security, the Jay Scap SYOP plans if you've read any of those notes already—called for the allout use of our forces. And thus this outcome for the Soviets which I am just representing here by this very bad outcome, that represents 300 million dead in the Soviet Union and U.S. However, we didn't expect to get off free by any means. We expected—in fact we exaggerated—the likely consequences because we exaggerated the Soviet forces. But we assumed that striking would almost certainly look even worse than losing in Europe, for example. At least for the United States it would involve a minimum of several cities. The prediction was made by the joint chiefs at one point of only 10 million dead. 10 million dead—very bad. Possibly less. Possibly worse than that. So let's say that this outcome would be for us worse than WAIT—even if WAIT is something very bad—losing Europe. Nevertheless we committed ourselves to that threat. And for the kinds of reasons we've discussed in the blackmail lectures earlier I think we can assume that the Soviet Union did not in

fact believe our possibility of carrying out that threat was zero. Even if the consequence we thought would have been worse than waiting.

So it comes out that the use of these forces to carry out the threat to protect our ally—we don't want to do it—but to keep the Soviets from doing this—attacking NATO let's say—we are trying to make it convincing that we will carry out this first strike.

Herman Kahn in those days pointed out that the way to make that threat credible was to improve the consequence of striking first in a variety of ways. And if you look at the reading in this he goes in some detail—ultimately he was really saying you don't have to make it look good, you don't have to make it look better than if there were no war at all, you don't even have to make it look acceptable in usual terms, but you do have to make it look better than the alternative of losing Europe.

And so he goes into these calculations (which got him the reputation of being a sort of Ghengis Khan—Herman Kahn) of how many would it be worth. He asked various people in Europe he said and elsewhere, how many Americans do you think we should or would be willing to lose to keep Europe from being occupied by the Soviet Union and its forces and its resources utilized by the Soviet Union? And he got answers he said like 60 million. And that it would be worth losing 60 million. That's in the recommended reading. Which he said they arrived at that half the Americans—100 million or so would be too many, 60 million was about a third, seemed about right to most people. Well, that's a question then of the utility.

You see underlying these numbers there are objective outcomes and then we have the evaluations. So he's saying the objective outcome would



be such that the evaluation would say that if this were that bad this might be marginally less. And therefore it would be credible that we would go here. Actually even if the Soviets' best estimate of our estimates was that we thought it was somewhat worse. Still they wouldn't feel as confident that we would not carry out that threat as they would, Herman pointed out, if we had no defenses whatever and this looked like, you know, 500. In other words this difference here Herman said, relatively speaking, suggested to the Soviets the credibility of our threat. And if we wanted to make the use of our strategic forces credible enough we should work on this outcome to make it better.

And there were a number of ways you could do that. Such as civil defense which he emphasized very much. He talked about civil defense actually in the way that the Reagan Administration does right now. And that isn't always fully appreciated. People laugh at the idea of evacuation which was critical to his calculations as something that you do when missiles are on the way. And obviously that is absurd. The thirty minute warning time, the fifty minute warning time. But Herman Kahn was talking about making this threat more effective. And he talked then about evacuating over a matter of days or weeks in the course of a crisis so as to convince the Soviets that we could put our citizens in a safe place. And the worst they could do then is hit our empty cities or hit just a small fraction of our people. Thus the threat would be more credible. Moreover you could add antiballistic missiles which would help you against the retaliation.

And then do a great deal of working on what was known as working on counterforce to find their missiles. It was not clear that we knew where

they all were there. So one argument for the B-1 (then called the B-70) was that it could do a hunter-killer role. A plane could go over and find the missiles that had not been earlier located and destroy them so that they wouldn't have as much chance to attack you. And by all those means you would raise this outcome.

There is one problem with this approach that is implicit in what Brown is saying. This is all related to the problem of using our strategic forces to protect our allies. And that is that there is direct conflict between that objective and the first objective of protecting ourselves from a first strike. Is that clear what the conflict is? Anyone want to comment?

Q:

No. The point is that to make it more likely that you will carry out the threat to hit your allies by this fashion—to make it more likely by increasing this outcome, OK? You are increasing the likelihood that as I say, under some circumstances, that you would go first. That's the point of what you are trying to do. But the more likely that the other side sees that you are likely to go first, the greater their incentive to go first—to preempt as it's put. In other words, as of today, the more we do to make it credible that in circumstances "x" let us say of fighting Europe, that we might actually carry out our commitment to strike first. And the more we seem to make that reasonable, the more it's going to seem reasonable to the Soviets to launch their strike since because of

this enormous remaining distance here that's about the only circumstance in which there would be any significant possibility that they would strike first. Now it doesn't follow necessarily that there is any particular likelihood after all that they would strike first, just because of the nature of the weapons.

Let's look at the kind of systems that we got in the late sixties. See what they would look like. Imagine a system that's based on hardened Minuteman missiles, hardened Poseidon warheads or Polaris warheads. Imagine that on both sides. Well, the Soviets had very little in the way of submarines but they had hardened missiles as well. In that case neither side (I'll give the Soviet outcomes) neither side can really reduce much what the other one does. The difference is very great from a situation in which you have soft bombers, let's say, on both sides.

Take this case. The Soviets here, let's say, if they were struck, would get minus 5,000. Suppose they struck first. The same. This is in the late sixties. They can't really reduce our forces by striking first. The same is true for us. Give this a zero here. Our outcome here would be—the numbers don't have to be comparable so I'll just give a number that's worse than this. Minus 1,000 let's say. Same here. If we go first you compare now the numbers for the one side here against the others. This is the U.S. If the U.S. strikes first we really can't reduce anything on their side. We could not hit their missiles in the late sixties. And so if we struck first it would be about the same. Likewise they could not strike our missiles, they couldn't destroy our missiles. They did not reduce in that circumstance their outcome from striking first.



In this case it doesn't matter what the probability is here. Say the probability is certainty that you are about to be struck. There is no incentive to launching on warning. There is no incentive to going first. And that being the case, by the way, it would be very hard for this outcome to be so bad that it would look even remotely worthwhile to launch a first strike. Even if you were sure, I repeat, that the other side was going to strike first or was in the process of it, you could wait. Because you had nothing to gain by going further. This was pretty much the real situation as of the late sixties. It was noticed in that situation that our threat to strike first looked rather weak at that point. Very hard to make it look even slightly reasonable to carry out our explicit formal commitment because it would have been simply, clearly, suicidal.

Just for contrast, take a look at another possibility in which the United States could have gone. Supposing we had relied entirely on the kind of missiles we had had in the late fifties—Thors and Jupiters, IRBMs in Europe and soft ICBMs—that is above-ground ICBMs. In that case for the Soviet Union, striking first would... This is the U.S. payoff. This is the Soviet payoff.

In this case striking first for the Soviet Union would give us a very bad outcome as before. But the Soviets could have gotten off possibly quite free on that. They could have wiped out with their first strike our soft IRBMs, Thors and Jupiters in Turkey, Italy and England and their ICBMs. And let's say if we had non-alert bombers they could pretty much wipe them out. And if they struck first we would simply have very little

to retaliate with. Let's say there were a few things that got through that they missed. So that they don't get off scott free. But in this case actually they might look like that. For us the same. If we go first (OK. Follow that?) If we go first we get a bad outcome but if we wait and go second—enormously different. One could guess that in this circumstance if you had even a slight chance—a one, a five percent, a ten percent chance that you were about to be struck the temptation to lose your force before you lost it would be enormous because you would have the chance of destroying the other side's force before it could get off the ground. It's retaliatory force would be enormously smaller than their first strike force. That would be true for the Soviets as well. They, too, would have this.

So from that point of view look at how the interaction might go here. In comparison say to a situation—this one let's say... Let me change this a little to imply that there is some difference in striking first but not much. We reduce a few of their forces. Here minus 4,000. In terms of the critical risks we could guess for example that in this case the United States would have to be very sure that it was about to be struck before it was worthwhile to strike first. Likewise the Soviet Union in the same situation here, both with missiles that can't be destroyed by the other side, would in fact strike first if it were very sure that the other side was going to strike first. Difference. In this case the opposite.

The effects have been, and I'm saying they are in a destabilizing direction. I'm going to say that the effects are going to make probably

the probability in both cases here look higher. By changing the nature of the weapons system—let's say going from this to this. If we turned in the Polaris and bought soft ICBMs instead—maybe a smaller number that could be called build-on or quantitative disarmament, maybe the numbers are smaller here. But the fact that these differences are such I think it would follow, we would see that in this case this figure has gone up

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strike first for this. This has gone the same let's say. This figure is the same. This figure is has gone up. What effect would this have on the Soviet expectation that an attack might actually occur if we moved in this direction or for that matter on the U.S.? I think we'd find that the effects in both cases would be that the U.S. would in fact assign a higher probability that the Soviets were about to attack. And the U.S. would assign the same for the Soviets. It would interact in these ways. I've got here... We are looking at this, I'll sum this up now.

I've got six elements, or let's see, I'm sorry, eight elements. Six payoffs and two probabilities. A very simplified model. These are 8 considerations to take into account. Obviously in any real life situation enormously more complex. And yet I am saying unless you look at least at these eight factors you are not going to understand the effect of a particular change in the weapons system because usually it does affect all of these factors in complex ways and if you are not



taking at least this amount into account you are probably not going to be able to predict the actual effects of these things and if you are not taking at least this amount into account you are probably not going to be able to predict the actual effects of these things.

Notice that even here you could easily elaborate this by saying behind each one of these there's an objective outcome to be looked at. Evaluations of the objective outcomes could change. Again you could say what does each side believe the other side's evaluation to be. That doubles your set of factors here. This is a very minimal set of considerations. I think it is enough to suggest that in the sense in which the word stable is usually used this situation is a good deal less stable. And the possibility of an attack here looks greater. That is especially true if the situation here is such as to create some sense of likelihood that there may be an attack of some kind. Let's say that this gets worse. There is let's say a tactical nuclear war. It could look bad for both of them at that point. I'll make it 90.

Anything that raises the probability at a given moment in the minds of one party that the other one might choose to escalate is going to interact in terms of the other side's calculations.

The fact is that the MX as of now is (I think it might be helpful in general terms to show what factors will stabilize this as opposed to (I'm dizzy up here, I'm sorry) as opposed to what will destabilize it. If we just take these figures—forget the actual numbers and take them as payoffs. Here are some of the changes that will work I think in a more stabilizing direction. If these outcomes go up obviously that tinclines

each side to wait and see whether a strike occurs. If this outcome goes down or this outcome goes down.

I'm going to have to give up, I can't follow this.... Rather than crack up in front of you let me move from this... I'm not up to it. ...to some questions which I think on a one-for-one basis, anything in the course—ask me anything. I may not know my wife's name at this point, but let's see where we go. I can give you all a vacation at this point for this night. That would make sense too, but let's hear some questions.

Q:

OK. Good. The question is why did we move in this destabilizing direction? First technology was moving. I've implied, by the way, as you've picked up I think, that the direction has been obviously not as strong as in this direction. But the direction has been from relatively this situation in the '60s in this direction. Let's put something here a little bit more realistic.

Both sides have submarine forces of which the United States force is thoroughly invulnerable, and is expected to be so for at least the rest of this century to any Soviet capabilities. That is not true. That is asymmetric. We have a significant capability to get the Soviets' submarines and the Soviets keep (perhaps for that reason) a much smaller proportion of their submarines on station. So they have smaller—much smaller—alert forces of submarines and we have a considerable capability

of getting most of those. Nevertheless since it doesn't take large numbers of submarine warheads to destroy large numbers of cities and create catastrophic capability the first strike capabilities of either side are distinctly limited at this time, OK? ...in the direction.

So let's say that a first strike here would be... a first strike for us would be very bad, let's say minus 1,000. That by itself of course means nothing. You have to compare it to some other interval to make that meaningful. Except that this is worse. Now if we waited and got a Soviet first strike against us as we've heard, we could not really reduce very sharply their ability to destroy us very much. We've been saying that right along. However, if the Soviets did strike first with their SS-18s they could take out now a large proportion of our Minuteman missiles. If they struck first. As of now. OK? That's 25 percent of our alert warheads basically.

The difference there is between a situation between now and some ten years ago (or even five years ago) when, had they struck first, they could not in any way reduce our ability to strike them. But our ability is so redundant that the ability to strike say 25 percent of the force you could say really makes no difference.

One way of calculating here would be then that if they struck first they would get let's say they are minus 1,000. And it would be about the same, that it really doesn't make any difference. That is a way of calculating this. These are evaluations. It would be reasonable to say that now, as ten years ago, the number of forces that would be left on each side would be so enormous that it wouldn't make any difference



whether you went first or second. So the things were just as stable now as if there were no counterforce capability at all. However, that is not the only way to bet that the military staffs will see this.

Five years ago or six years ago, let's see, actually in 1976 (we began to install counterforce capability in '77)... In 1977 the United States began to install Mark 12A warheads on their Minuteman 3 missiles (you don't have to know these numbers, it is relevant to the current scene) with NF20 guidance systems. These were twice the yield and half the error—twice as accurate which is more significant—than the earlier warheads on the Minuteman 3 missiles.

And for the first time these had a significant capability of targeting and destroying Soviet hardened missiles. This was the first time since the mid-sixties that either side had been able to get any significant number of the hardened missiles of the other side. We don't have enough Minuteman 3s in fact to target all of the Soviet hardened missiles. And it so happens that we can't get enough Minuteman 3s for technical reasons. The weight of these warheads is such that the range is reduced. And we don't have the range yet to cover all of the Soviet missiles in the southern part of the U.S.S.R. So we can get a large fraction actually of the Soviet missiles with our Minuteman 3.

The Soviets had no such capability in '77. But in '77 they began to test, for the first time, new warheads, a new guidance system, with a comparable capability to that that we were deploying in '77. We had of course tested it earlier so they knew we were coming in to this. We acquired it much earlier. They began to install their missiles—the

famous SS-18 Mod. 4 warhead in '81. This is actually the basis of the famous window of vulnerability.

Now I'll leave this behind for a moment. I'll get on the exact circumstances of the debate of the last five years. The point that Reagan was making and in particular Paul Nitze for the Committee for Present Danger, was that the Soviets were acquiring—they would have enough warheads on their SS-18s (which are larger than our missiles and have more warheads) that when they got accurate enough (which in fact turned out to be in about 1981) they would be able to target all of our Minuteman missiles. In a surprise attack, then, or in a first strike, they would be able to take out not in fact all of them because they would miss some, but some very large fraction—perhaps 90 percent of our land-based missiles.

The statement was made then and is made today over and over again by very prestigious people (including Harold Brown here and others) that we had no comparable capability. That is a very deceptive statement. That occurs in Harold Brown's statement here and in the speech he gave to UCLA recently, and Reagan says it all the time. That's quite misleading. It's often interpreted to mean (and sometimes people do say), "We had no counterforce capability and will have none until the MX." That's false. As I say the Minuteman 3 does have such capability and had it some four years deployed before the Soviets. But if you were to press somebody from this point of view on why they were saying such a thing then the argument comes back, "We don't have a comparable capability. We can target only a fraction of their warheads and they can target all of

our land-based missiles." That is a much more significant threat it's put to us and we must have a comparable capability.

I'm quoting now catch phrases that recur constantly in the press and in our President's statements and so forth. Have you heard? Do these sound familiar? Another would be, "We need the MX to have a comparable capability." "Enough MX will do it." The 200 MX you notice would have 2,000 warheads which, it so happens, in connection with the 900 Minuteman 3 warheads, (Mark 12A system and so forth) would have given you 2,900 warheads. Which is an interesting figure.

There are 1,400 Soviet missiles—hardened missiles—to be covered. You need two warheads per missile to allow for reliability of the warhead getting there. And any one that gets there has a good probability of killing the missile. So you need 2800 warheads. That's the magic number to cover all the Soviet land-based missiles. The unmentioned 900 Minuteman 3 missiles and the 2,000 MX missiles, I'm sorry, 2,000 warheads—200 missiles, 2,000 warheads—would give you the 2,900 figure. Reagan cut that down to 100 MX warheads which we are always told is not enough to get threaten the entire Soviet land-based system. But in fact he's going for a very large figure—thousands of what used to be called Trident 2 warheads or D5, now known as D5 warheads which are submarine warheads with a comparable capability. Those plus the MX plus the Minuteman 3 are very much more than enough to cover all the Soviet land-based missiles.

Well, they put it, that gives us a comparable capability. They can cover all our land-based missiles, our land-based warheads, we cover all



their land-based warheads. It's parity. We are not striving for superiority. There's only one problem. Who knows what that is by the way?

Q:

Yes. How does that work? How does that affect? Submarines. What difference does the submarine make?

Q:

Well, yes and no. The difference is this. The Soviets have 75 percent of their warheads and a much higher fraction of their alert warheads—about 90 percent of their alert warheads on their land-based missiles. The total numbers, remember, are about the same. But the fraction on submarines and on land is very different. We have about 25 percent of our warheads on land. So their ability now to get all of our land-based warheads but none of our submarine-based warheads means that we have right now, with our Minuteman 3s, an ability to get a higher fraction of their overall warheads than they can get of ours.

We can get about 60 percent of their land-based warheads on calculation—that's 60 percent of 75 percent, or 60 percent of really 90 percent of their alert warheads. We can get a higher fraction—striking first, of their overall warheads than they can get of ours. Now this is something of a technicality because in both cases we're left—both sides

would be left—with quite (I'm saying this is without the MX)... With the MX, then, we would be getting the 90 percent of so of their alert warheads—getting it on paper—if it worked, if their systems worked. We would not be getting parity.

The notion of parity is a simple hoax to describe for the American people in acceptable terms what is in fact a very clear attempt to get a functional superiority in terms of the threat. And it goes one step further than that. The Soviets have no capability to get out submarine missiles. We have a sizeable capability to get their submarine missiles by our ability to detect them, track them, and kill them with out very elaborate systems. That's getting better and we're working very hard at getting it better. That means that on paper at least we would be approaching an ability to threaten—to threaten now—100 percent of their warheads. Where they are left, this decade and next decade, with at most the capability that they now have to get 25 percent of our warheads. In those terms, then, we are heading toward a significant superiority in counterforce capability.

But now the question really was, so what? Why would anybody bother with this? Well. I don't want to discount the point—it sells weapons. It's jobs, it's profits, it's an argument for weapons. They've got it, we need it, it's the kind of capability we've had in the past, we should have it if possible and so forth. And all these certainly do count. But I do want to point to the one thing that's implicit in this course, or explicit in this course, that there is a coherent strategic objective that at least is compatible with this direction of technology.

If you are trying to use your weapons to "protect your allies" (including not only Europe, but interests that go outside Europe), it's very hard to do that with weapons that cannot even pretend to lower the weight of attack that can be brought against you—that can't in any way disarm the other side. It can be argued, I'm saying that there's two sides here, and I'm saying the other side is to say that all of this is nonsense. Supposing we do get 70 percent. Supposing on paper we get 100 percent which will not really mean 100 percent. It will mean that we get, who knows—50 percent, 60 percent, maybe we get 90 percent—the fact is that 10 percent of those forces are enough to destroy us so what difference does it make?

Well, there's two answers to that. One is that anybody who has been around a military staff will know that in a situation where you expected that you might face a first strike from the other side, and if you had the capability (by going first) to lower the weight of that attack by some 90 percent or 50 percent you should expect the military to take that fairly seriously and press that advantage of striking first quite seriously. Either side would do that—the Soviets or the U.S. Yes?

Q:

That's right. Well, parity of what? You have to say parity of what.

That's why this diagram that I was trying to play with but I'm not up to in this state.



Q:

Again, I say you have to say parity of what. Parity of numbers in advance? That's not the issue. How about... You see in both these situations, both of these, you could have parity. But in one situation the parity is a parity of an inability to disarm the other side. In the other situation there might be a parity of ability to disarm the other side to some significant extent. And the first question is in that circumstance can you imagine that a military—let's say high military commander—would say, well, let's say the Soviets facing the MX. The Soviet commander says, "There's fighting in Europe. Tactical nuclear weapons have been used. It's likely that this will get out of hand. If we attack, we can destroy the MX and the Minuteman 3 and the Minuteman 2 and the Pershings and Cruise missiles in Europe."

To which we would hope Chernenko would say, having done his homework. "What good is that? They've got 5,000, 4 or 5,000 submarine missiles. Submarine missiles, submarine warheads off shore, what good does it do to get the MX?" I think you could expect the general to say in words not unlike, by the way, what the Tzar faced in WW I on the question of mobilization, "That may be, but if we wait we will get the submarine warheads and the MX and the Pershing and the bombers and the Minuteman 3." I would rather delete those. I think that can be expected quite seriously. And it cannot be taken for granted that that will not sway.

One other factor should be brought into account that's getting increasing attention. A very good article in the Scientific American

recently by John Steinbrunner on launch under attack which points out the particular problem of the vulnerability of command and control systems. The Pershing alone, assuming (as the Soviets insist) that it does have the range to reach Moscow (contrary to our Pentagon's claim) could, on a ten minute warning, take out the Moscow central command headquarters with its high precision—if it works. Could do that on ten minute warning. It could do that to other command control systems in general.

That would mean that if there were indications of an attack, such as are generated constantly by false radar warning, or simply the logical inference, "We're in a war which can well escalate, which can blow up." The Soviets would really be facing (because of the existence of the Pershings there) the consideration that some 5 or 6 or 10 minutes from now there will be no command capability whatever to give orders—to execute orders, to coordinate an attack, to pick targets, or anything. Either they use those weapons in a preemptive attack while they have the command control capability to do it, or they have a system that has suffered what our Pentagon calls "decapitation" (in our plans to execute that kind of decapitation).

They say that that puts pressure on them to automate their response since there would be no time if there were an alert warning of Pershing missiles coming to make any decisions. Only a computer could make the decision on the basis of radar warning in time to get the missiles off before others arrive. That problem becomes particularly acute, by the way, when you combine the Pershings and the MX (which is not until the late '80s). The MX is supposed to come in in '86. The Pershing doesn't

cover all the missiles. And if the Pershings should be fired (or if they thought the Pershing were being fired) they could make arrangements next year (or this year in looking at that) so that if Moscow were destroyed, then, and then only, after that had happened those missiles would be released for firing.

However, as I say with the MX you get a combination where they are going to lose both their command and control and their missiles within half an hour. Half an hour doesn't really allow for time for much decision making either. The pressure on them then to go to launch on warning will be quite significant. And they might actually do that. As they have said they would. In an eighteen month period, ending in the spring of 1982 it was discovered, our system had suffered 147 false alarms, of which 4 went into 3 or 4 minutes each and command and control planes took off, refueling planes took off. A lot of actions were taken on the basis of that alert before it was discovered that there had been electronic failure or in one case a false (a game) tape had been put (a simulation tape had been put) into the system (just as in the movie War Game by the way).

If the Soviets are pressed into launch on warning by our MX and the Pershing, we can all then wait for the first really good false alarm on the Soviet Union. We can only hope that their system is a lot less accident prone than ours is and there is no reason to hope that at all. This would seem to be a fairly unstabilizing development. By the way, aside from automated launch on warning, right now the Pershing development itself almost forces the Soviet Union to delegate (under at



least under some circumstances) to delegate the execute order to lower commanders. I described how, when we were facing command and control vulnerabilities in the late fifties, our presidents did, in fact, delegate that order in case communications were cut out with Washington. The Soviets will, even if they don't automate, will virtually have to say to their lower commanders, "If you are cut off from Moscow, you are on your own." The alternative would be for them to have no retaliatory capability whatever.

In the face of the Pershing we could, in fact, simply decapitate them in a literal sense with one warhead essentially—or with a couple of warheads. And they would have no retaliatory capability if they required a centralized order under all circumstances. I think we can assume that we have forced them in a position of delegation. If you think that's safe, consider what that meant in the case of the Korean airliner which seems to have been an example of what happened when a field commander, or an air defense commander was allowed to make a decision. And in that case had a false alarm in effect—mistook the nature of the plane. Suppose that that commander had had similar authority in dealing with offensive missiles (which he probably did not have last year). And we're facing the threat of a Pershing and the possibility of a false alarm in that case. That does not make the world safer to move the Soviets in that direction.

Well, a long way around to the question: Why would this appear reasonable to anybody? To the people who are selling the weapons it doesn't have to appear reasonable. They can sell the weapons. On the

other hand the people who buy them don't typically buy them just because they tell themselves Martin Marietta needs the business—or Rockwell. They have an explanation in their minds. And that explanation may or may not drive what's happening, but it does in fact, I think, give a good deal of coherence to a lot of the pattern of decisions that go on. I think it is not without effect. And the explanation in the minds of the people who are buying this stuff is that it is not meant to deter nuclear attack against the United States. Specifically I'll just go on for five minutes.

Let's look at the Pershings for example. The Pershings have been admitted by Richard Pearl, Assistant Secretary of the Defense Department, cannot survive an attack by SS-20s. They are presented often in terms of deterring an attack by SS-20s, but that's basically a hoax. The SS-20s or other weapons would destroy the Pershings. If the SS-20s attacked there would be no Pershings with which to retaliate. So the Pershings cannot deter attack by the SS-20s. On the other hand the Pershings can destroy the SS-20s if they go first. So the Pershings are not only targets for the SS-20s, being vulnerable, but they also threaten the SS-20s with destruction if the SS-20s wait in a crisis in which there is some possibility that the Pershings will be used. That means that the Pershings are an incentive to use the SS-20s on the Russian side. The existence of the Pershings raises the chance that the SS-20s will be used against Europe—or for that matter, ICBMs which could be used against the Pershings.

Essentially the same is true of the MX. (I think I really can sum this up in 5 minutes.) The MX in fixed silos by the calculations of the

defense department, cannot survive an attack by SS-18s any more than the Minuteman. The Minuteman after all was indeed vulnerable in those silos. The MX is, if anything, more vulnerable. It's larger, it doesn't have as much cushioning in effect in those particular silos. It's certainly not less vulnerable. And it puts 10 warheads in a single hole instead of three. In other words, one Soviet warhead can destroy 10 MX warheads where it would have destroyed three Minuteman 3 warheads. Moreover, the warheads that it's destroying are warheads that can (compared let's say to the older Minuteman 3 warheads) are warheads that are larger and can destroy—can threaten—10 Soviet silos (or for reliability at 2 per each it could threaten 5 Soviet silos).

So the incentive that the MX gives to the Soviets to use their missiles—their SS-18 or 19 or 17 on the MX—is greater than if they were facing only the Minuteman—if there is reason to fear that the MX may be used. In a crisis, then, in which it appears that the MX might be used, the MX has increased the likelihood of an attack on the United States. The addition of the MX itself has not effected very much the outcome to the Soviet Union if they strike first. It doesn't make it much worse, say whatever it was here, it doesn't make it much worse.

What it does do is it improves the outcome for us by destroying some of the Soviet ICBMs and it makes the outcome worse for the Soviet Union of being struck. Instead of 1,000, let's say some marginal difference here. Which means that the Soviets have to be somewhat less sure than before because this is worse—less sure than before that they are going to be struck before it is worth it for them to strike. They will strike



on more ambiguous warning than before. They'll strike earlier—before they are certain.

And moreover, because we've improved this outcome for ourselves somewhat, we are more likely to use it. For a given expectation that the Soviets attack, the likelihood that we will attack is somewhat higher than before because of that improvement. That lowers U.S. deterrence. One would have to say that the effect—if any—on the probability of an attack is that this has gone up. That's against what Herman Kahn called Type I deterrence. How could it possibly be justified? Because Type I deterrence is not our only objective. It is not the main objective of our forces, it is not what has driven our new forces in general, and specifically it is not what the MX is for.

The Scowcroft Commission gives one reason, you'll see (it's a couple of reasons) for the MX but it does not include the reason of deterring nuclear attack on the United States. It has that much intellectual honesty from Scowcroft. It does not pretend that the existence of the MX makes an attack on the United States less likely. You'll find in the Scowcroft report that they relate the MX entirely to this objective of protecting against a conventional attack by the Soviet Union or the put it a "limited nuclear attack." Now. Why is it relevant to a limited nuclear attack? Because if it were an allout nuclear attack there would be no MX—can't deter that. It has to be an attack, then, that does not attack the MX. Maybe it attacks some Minutemen, but not the MX. Maybe it attacks overseas.

All of that looks pretty unlikely. Let me suggest to you what the relevant situation is. A Soviet retaliation to a U.S. first use. Could

that happen? I would hope that by this time in this course you would realize that there have been enough cases in our history where we have come close to U.S. first use and threatened it—as we threatened it. That could actually arise.

This has been so ragged and I apologize for that. Let me really take five minutes more before the break. I know that's a good laugh line but I appreciate it because I think actually I can actually wrap a good deal of this up in the form of propositions that will at least explain what I am driving at.

I read the Quemoy crisis material (which you are assigned). But I would look for in it (and see if you do not read this the same way)... as meaning that the U.S. in fact [took] quite seriously the possibility of having to initiate nuclear war in 1958, despite an expectation (probably unjustified) that the Soviet Union might well retaliate—either against Japan, or against the Seventh Fleet, or against Taiwan, or a fairly serious retaliation. And in the face of that we nevertheless were determined to use nuclear weapons if necessary and thought that it might well be necessary.

I draw from that study (those pages that I've assigned which are only fractions of the Mort Halperin study)... And you're more than encouraged to read the rest of the study and understand what the whole crisis was about. But the pages that I assigned were meant to suggest to you that Dulles was, after all, not bluffing; and that it wasn't a Dulles policy, it was an Eisenhower policy and a United States policy; that the United States in fact came closer to nuclear war than we imagined; and that the choice was essentially up to the Chinese.

I think in the light of that that Eisenhower's briefer comments about his willingness to go to war over Korea are to be taken quite seriously. And other threats as well in this period. And I think that since we are still making such threats—the Bleckman case and others—the 1973 crisis suggests that this can arise in the future.

As Nitze points out in one of the articles on the recommended reading (his 1956 article) it is very hard rationally to carry out a first use of nuclear weapons (actually he says a strategic use of nuclear weapons) unless you have reason to believe that it will be essentially one-sided. He makes the point for strategic weapons. I think the point applies very strongly to the use of tactical nuclear weapons. It is very hard to imagine that the use of tactical nuclear weapons here in a limited war of any kind, would serve our purposes unless it were one-sided. Why might it be one-sided? If the other side believed that if they retaliated (and the Soviets have the ability to retaliate and have had since the early '50s) the possibility that it would go to allout war is excessively great.

I think a good deal of what the U.S. has done over this entire period and what it is doing right now can be understood as, in effect, denying the Soviets the ability to put what we might call a "nuclear umbrella" over allies in the Third World and their forces in Europe. They have the ability to threaten to retaliate to the first use of nuclear weapons on which we rely for our extended deterrence. We don't want them to do that. That's what we call our nuclear umbrella—that we could reply to nuclear attacks by retaliating. We don't want them to do that.

The way to keep them from doing it is to threaten them that things would go badly—that we would escalate in one of three basic ways. We



could do what this administration calls "horizontal escalation"—we could move the nature of the conflict to somewhere else where we were stronger. If it had already gone nuclear and we were using nuclear weapons and they retaliated, we could punish that by escalating—say to a theater level—with Pershings. If we used our Pershings after the Soviets had retaliated to our neutron bombs with their neutron bombs, why would they not reply with their own theater weapons that remained from our attack?

The answer is meant to be the MX. And why would we use the MX? In theory because if we use it (two reasons). If we use it we will reduce the weight of attack that can be brought to bear against us. Granted not to very low levels. But at least we have a reason to use a strategic weapon which simply would not exist if we didn't have the MX and the Minuteman 3. So better to have it to make that threat than not to have it at all. The threat is more likely.

And one other thing makes it still more likely. Since the Soviets have some ability to preempt themselves, and since the MX is vulnerable, in the very circumstances we would want the threat to be credible (that we would use the MX); those are circumstances of limited nuclear war of a rather large scale, where we would, in fact, have reason to fear that the Soviets would use their preemptive forces. We wouldn't have that reason to fear if the Soviets didn't have a disarming capability themselves, if they had not bought accurate weapons that could hit our MX.

In effect they have played into the hands of this threat—or have created this threat. Our threat amounts to the threat to fear their

attack. And we say "If you do this or that we may fear that you will attack and we can respond because we have bought the weapons with which to respond."

All of this may be a bluff—a pretence that under some circumstances we would be willing to carry out our commitments and our threats to escalate a war in order to hang on to areas in the Middle East, in Europe, and elsewhere. Just a pretence. But to make that pretence plausible we are buying the kinds of weapons we would buy if we believed it. And as we buy those weapons the Soviets are at least imitating us and perhaps for very similar reasons—to threaten us. That if we do x or y they may fear our attack and we have reason to fear a blowup. Both sides then are buying weapons as if they believed that they could use them advantageously in some circumstances.

There is a moral to all this. Kurt Vonnegut wrote a book called Mother Night in which he said "This is a book with a moral and here it is." And the moral of his book Mother Night is the moral of this course, at least as I've just focused it. You are what you pretend to be so you should be careful what you pretend to be. For a generation we have been pretending that we were willing to defend U.S. interests worldwide and in Europe by carrying out nuclear first use of tactical nuclear weapons and escalating that war as necessary if the Soviets retaliated. And the Soviets have begun to pretend the same. And they may both may be becoming systems that are what they pretend to be.

OK. Let's take a break for 10 minutes and then deal with other questions. 15 minutes.

BREAK

...specific military targets and thereby promptly disrupt an attack on us or our allies. That's what the reason that Scowcroft gives as... (he may or may not believe it) but that's the reason that he chooses to sell this weapon to Congress with, essentially. And Congress bought it. Question: If you are trying to convince the Soviets that under circumstances of a massive conventional attack in Europe, we would launch the MX, is that threat (and that is why you are buying it), is that threat more credible when the MX is in a fixed silo or let's say put the same warhead in a submarine? What do you say? Let me hear some analyses of that. Well, you've given one answer in effect.

Q:

The MS in a vulnerable silo—in a fixed silo—has... Whatever incentive you have to use that MX at that time, if it's in a fixed silo there will be the incentive that if they don't use it under those circumstances, they might well lose it. And moreover, the likelihood that they would lose it is all the greater because it is threatening to the Soviets as well as targetable. It's a combination of a threat and a vulnerable target. So that you have to use it or lose it.

I would say that without that characteristic it's very much harder to make it imaginable that even in the circumstances of a massive conventional assault you would fire that weapon. And the reason is that



if you could wait... Any time you fire it you are flirting with suicide. In fact you are virtually assuring suicide. If it were absolutely clearcut, by the way, that without any doubt it was suicidal to use that weapon, it wouldn't seem to make any difference where you based it. You know, it's equally implausible except for this wholly, let's say, conventional but irrational notion, "I would like to use, let's take some of them with me, and so forth."

CHANGE TAPE SIDE

...than if you didn't use it. The argument actually (it's crazy enough but it is made—it is the argument that Nitze and then more recently Reagan has taken up as the argument for the MX and others) that is that the side that strikes first may so reduce the other side's capability relative to the attacking side's residual forces, that the other side will choose not to reply at all.

I think you will recognize this if I put it in the Soviet form as Nitze put it or as Reagan put it. If the Soviets hit our Minuteman missiles—let's say we have no MX—if the Soviets hit our Minuteman missiles they are left with very large megatonnage by which they could spread a lot of fallout. We are left with several thousand warheads but nothing to hit except their cities. If we start city busting they can retaliate on our cities at a greater level than we can theirs. OK. Have you heard that argument?

This is the argument on which the window of vulnerability was sold. Unless you accept an argument of this sort it doesn't make any difference

whether you go first or second. The reason that Nitze and Reagan said that it made a difference is the possibility that the side that goes first will so change the bargaining power, or so change the relative balance (you've been hit, I struck first, but I have a lot left) that you won't reply at all even though you could. Even though you could annihilate the other side.

Given that argument, then, that's the argument why the MX might be used at all. But I will say I think that an MX, with the pressure on it that you would have to decide sooner rather than later because you cannot wait (you might lose the weapon), does make it marginally more likely. In fact, I'm sorry to say it makes it a good deal more likely to be used. It definitely worries me in its existence. That's also true of the Pershing.

Let me quote one thing here. George Questor made an analysis I notice (in a large book on the Cruise missile and the Pershing) that the argument was made that the Cruise missiles and the Pershings should be put ashore on land (where they are clearly vulnerable) rather than on sea (where they would still be somewhat vulnerable but much less vulnerable). The argument that was made for putting them on land was that they were more likely to be used—that they were a more credible threat. That is not a familiar argument in the case of the Pershings and Cruise. I happen to think that it has some validity. It is more likely to be used. And I can believe that it was in the minds of some of the people who said they wanted it on land. The other argument was it's more visible. It sounded somewhat crazy.

You may see in the reading of the last week McNamara makes the point in his foreign affairs article that first use should be eschewed. We should go for no first use policy. Among other reasons because first use is thoroughly incredible. And since it's incredible why pretend we might go first?

Why is it incredible? Because any use would necessarily escalate all the way (or almost surely, not certainly, but be likely to escalate all the way). At least too likely to escalate. Therefore the threat he says is incredible. He then proceeds to say, later in the article you may notice, that we should rather urgently remove several thousand, more than half of the tactical nuclear weapons in Europe. He put most of those nuclear weapons himself there, by the way, something he doesn't draw attention to in the article.

But the reason they should be removed is that they might be overrun. They are so short run—they are so close to the front—that if the Soviets were to attack, within hours of their attack those warheads would be in danger (in some cases less than an hour) they would be in danger of being overrun and captured by the Soviet forces. The pressure, then, on the captains, the majors, who are controlling these weapons—sergeants in some cases—to use them before they were captured, and to use them to protect themselves from being overrun is clearly, says McNamara, very dangerous. And therefore they should be removed.

Notice what that's doing to the logic of his earlier argument. What he is saying is those weapons might get used first if the Soviets launched a conventional attack. By virtue of their vulnerability (which



is a function of their short range and their closeness to the front) they, in fact, might get used. That's why he wants them out of there. So the threat to use them is not incredible. Might it deter the Soviets? Yes, I would hope that it would. I would think, in fact, the likelihood that the Soviets would get nuclear weapons if they launched an attack into Europe is fairly high. And they know that. And that is deterrent.

So the argument that one finds from the arms control community in general—that first use threats are never serious because for at least many years they have been obviously thoroughly incredible—is (to take this one instance right here) false, actually. The argument they base on it, then, has to be reexamined. We should not buy them because they are incredible—they are just a waste of money; they may lead to accidents; let's save the money and so forth—I think doesn't express the real nature of the situation. Nor does it explain why the weapons got bought. In fact there is reason to believe that a major reason those weapons were put close in in Europe—in weapons that have only in some cases five miles range, 12 miles range—is precisely because they are in fact a very credible threat and for that very reason.

The same argument, then, applies to longer range weapons that perhaps can't be overrun (although they would be in a matter of days or weeks perhaps) but are subject to attack by the other side. And not only, by the way, to nuclear attack. If you look at many of these weapons they would be subject to attack by conventional weapons. The SS-20s in their fixed bases, for example, could well be attacked by conventional

weapons. So in any kind of fighting you do have this factor of using them or losing them. And that makes them damn well credible. Credible enough to scare me. And undoubtedly the Russians. And that does give them some deterrent effect.

To say that they can have no deterrent effect because their use would likely explode and be suicidal for all of us—that latter proposition may well be true—but the idea that they would not be used is much less true. And the likelihood they would be used relates to their vulnerability.

Apply the same argument to the Pershings or the SS-20s, and to the SS-18s and the MX. The MX is more likely to be used in a world in which SS-18s have the accuracy to threaten them. By the same token, the SS-18 is a more convincing threat in a world in which it is subject to attack by the Minuteman 3, or eventually by the MX. In other words, technology has been allowed to move, and the arms race has been allowed to go in such a way, that both sides have acquired some degree of preemptive capability.

Both sides have acquired accurate missiles, and are acquiring more accurate missiles with which to threaten the other side's forces and their command and control. Both sides have chosen to keep that race going in the knowledge that it was leading in that direction rather than to shut it off. The Soviets have offered to shut it off, whether they meant it or not. We never tested them on that so we don't know, because our presidents clearly chose not to try to cut the race off, since they wanted this capability. We must infer that they preferred a situation in

which both sides had some counterforce disarming capability, than the situation that earlier prevailed in which neither side had such capabilities.

Was this totally blind and irrational? That's one theory. Was it totally a response to Rockwell, Boeing, Martin Marietta, General Dynamics on our side, the military industrial complex which is extremely large on the Russian side and may end up running the country? Is that all it is? That's possible. However, one notices that other explanations are given and that the performance is in accord to some degree with these other explanations.

The other explanation is that there is a continuing group of policy makers in this country. And Nitze has been a policy maker in nearly every administration for the last 30 years or so—or at least a major outside influence on policy. He's one example of this force who believe that the United States cannot dispense without the first use threat and without a threat to escalate and for that it has to have some degree of counterforce capability. That could mean that we can accept Soviet counterforce capability as well. What I was really trying, not succeeding very well to communicate earlier, was the following point.

In the world where the Soviets have a sizeable retaliatory capability under all circumstances, it's very hard to make it appear that we might use our strategic forces, unless we had reason to believe that the Soviets might use theirs. It would be hard to believe that the Soviets might use theirs under any circumstances, unless they could achieve something in some military calculations by doing so. In other words they



would have to have some counterforce capability—some ability to improve their situation, to disarm us to a degree—or there would be no basis for imagining that the other side might strike. And if we had no basis for imagining that then they could wait. They could wait for us to attack under any circumstances and simply retaliate—unless they had a disarming capability.

That means that whatever disadvantage there is to their having a disarming capability for us, there is an offsetting advantage in the eyes of these policy makers. The advantage is that it makes it plausible that we might fear a Soviet attack. And only if we fear a Soviet attack to some degree (without being certain) can we make plausible our own threats that we might strike first ourselves. To say that is to say that some degree of Soviet preemptive capability may well be seen by people as smart and analytical as Paul Nitze (who certainly can follow reasoning a lot more complicated than this—and does it) that Soviet preemptive capability is simply essential to the protection of U.S. interests.

That doesn't mean necessarily that he would put the MX in fixed silos (that's not his choice, as a matter of fact) if it were cheap to do otherwise. If he could make the MX invulnerable for a million dollars, I would imagine he would do it. He would probably pay, in fact, a lot more than that if he could. I am suggesting that the reason they find it acceptable for the MX to be in Minuteman silos, relates to the fact that it, in fact, serves their purposes better that way than if it were... It serves this particular purpose, even though the cost is some degree of risk that the United States will be destroyed as a result.

OK. Let me try some short answers. See if I'm capable of it. Yeah.

Q:

Yes.

Q:

What's your question then?

Q:

Well, of course not all mistakes are lies. And the Adam (??) may not have kept abreast of some of these things. So he may have believed some of the things he heard. Statements are made, for example, by people at Livermore Labs (and even the president has often made these statements)—there have been many statements in the media—that the United States forces—vehicles actually—have remained constant since the late sixties. That was a very common statement. And you will often see charts, I mean really constantly. The president has used... the president used (in one of his television debates actually) a chart (rather recently) but of a very common sort which shows Soviet missiles, now, going up (you know, like this) in the seventies while U.S. missiles are absolutely flat. And that's perhaps what you are referring to.

And that's true. Extremely misleading in that the number of missiles by itself affects none of these elements whatever as an element of

missiles. Missiles do not as I've often pointed out, do not destroy targets, do not threaten targets—warheads threaten targets. And during this period when the Soviets were going up (actually not quite like that) the U.S. warhead, the Soviets were producing from 1970 here 'till 1975, when they began putting in Merve missiles... They were producing warheads at a linear rate like this, one warhead per missile. The U.S. was merv-ing its missiles and was increasing its warheads much faster than the Soviets. It was much cheaper and more effective to be putting more new warheads on the missiles which were just vehicles, like a bomber body and putting new bombs in. So in fact we were greatly increasing the number of our warheads during a period when our president has repeatedly told us that the U.S. simply stood still, and was thereby in effect unilaterally disarming (have you heard that phrase?) in the early seventies. And that's what he has to repair now.

Referring precisely to this chart, the U.S., in a period when the Soviets were putting up their forces by, you know, something like 30 percent or something like that, was doubling our number of warheads. We doubled the number of warheads between 1970 and '75. And the Soviets went up much less in that particular period. So these are the kinds of extremely misleading things they are saying. That's not a strict lie, but it's just... To have presented missile figures is hardly worthwhile at all because missile figures per se are very meaningless. But to present missile figures without presenting the relevant consideration as well (the warhead figures) is, you know, quite deliberately deceptive. And that was done by The New York Times, by the Washington Post, by Time,



Newsweek, week, after week, after week in the course of this buildup to deal with the window of vulnerability. Yeah?

Q:

Well, let me address something—take off from that just a moment. I'll mention both that problem and something else in the Scowcroft Report that's worth mentioning. The Scowcroft Report was meant to be something that would garner Democratic support as well as Republican support to get enough votes to kill the opposition to the MX—which it did do.

At the same time (to save money really) and perhaps for the other advantages I've mentioned, they gave up the extremely expensive cover of trying to make the thing mobile and make it look like a deterrent weapon (which is not what it was meant for). So they put it in fixed silos. If you read the Elizabeth Drew article I think you will see the apparent reason the president gave up the Carter mobile basing scheme was that it was objected to by Utah—by his close associates, Laxalt and others in Utah and Nevada. And this ruled out then, a scheme that would have somewhat reduced the vulnerability of the MX for some limited period—until the Soviets had enough warheads to deal with it.

That left him without anything very good to go for. He went for the Dense Pac Scheme for a while, if you remember. And then when that was shot down in Congress, for the fixed silos. So they had to explain why it was not disastrous to put these in the fixed silos in the short run. So truth broke through, actually, in a rather spectacular way as was

often pointed out. Scowcroft points out that there was no window of vulnerability in the sense in which Reagan had been describing it all this time.

Reagan had been talking about, for some years, that the window of vulnerability was not merely that the Minutemen could be destroyed, but that the Minuteman, and he was assuming the bombers could be hit. So that we would lose our bomber force as well as our Minuteman force—and leave us with what he described as these little pea-shooters aboard the Poseidons. There are thousands of warheads but tiny little... There was always a sentence, you know, that went "And the submarine warheads is all we would have left." Several thousand of those. But all of our big... They emphasize another factor—megatonnage. So the big megatonnage—the big yields were on our bombers and on our land-based missiles.

Now you recall that? That argument? The window of vulnerability, then, was that both our bombers and our ??? could be hit. How would that happen? Because the submarines—close-in submarines—would launch short warning time missiles at our bombers and catch them unalert—catch them before they could get off the ground by having a very short flight time and very little warning time. And the Minutemen would be destroyed by the SS-18. But there is a problem with that as Scowcroft points out.

Here's let's say the U.S. Here's a bomber base. Here's a missile base. The missile is to be hit by an ICBM over here which has 30 minute flight time basically, and gives warning almost from the time it takes off from our infrared satellites (which pick up the exhaust from the missile as it takes off). So as these missiles take off, from the time

they take off we have 25 minutes warning or so. Which doesn't mean that's in the machine in effect. By the time it gets human consideration something less than that, but it's on that order. A submarine here, to get these planes within 10 minutes (before they can take off because they can take off within 10 minutes) would then fire from this area. But here's the problem. There's an insoluble problem of coordinating these two things as Scowcroft finally points out.

Now Scowcroft knew this all along, and everybody else knew it all along. By the way, how many people saw the movie "First Strike" on television around here? See that? You may recall that they showed this attack, where the bombers are destroyed by submarine missiles and the planes simultaneously. We have nothing left except those submarine missiles out there right off. And maybe some day the Russians will be able to get those too. They would see an off hand way. I am really expressing the way this is expressed. Because the submarine problem is always handled in about a sentence and a half to show that we have nothing worth mentioning left.

Well, as Scowcroft points out (I don't know if I'm capable of explaining this this particular evening) but if you launch these missiles first—since they have a longer flight time—so that the warheads will arrive at the same time, see? So you launch these 20 minutes ahead of these. These are 10 minutes away. If you launch these 20 minutes earlier so the warheads will arrive at the same time, the bombers—which can act on alert—will have 20 minutes warning on which to take off and they only need 10 minutes. So the bombers escape.



If, on the other hand... See the missiles can't take off on warning, but bombers can take off on warning. If on the other hand, then, you coordinate the launch of these two types of weapons, so that the launch occurs at the same time (you don't give advance warning to this), the bombers will get hit 20 minutes before the warheads here arrive on the missiles, right? That means that the missiles will be subject—our missiles—will have not just radar warning, they will have the warning of the fact that all of our bomber bases have in fact just been destroyed. On that basis you could afford to either just launch them (on the basis of this) or, if you like, launch on warning on radar is no longer very ambiguous.

If you've got radar warning of this it's like if you've seen "War Games" you not only have the tracks here but you have unambiguous news that in addition to the radar tracks here you have the fact that our bomber bases have all been destroyed. That is really quite suggestive that Soviet attack is under way. An under those circumstances you could fire your missiles. So there is, in fact, no way of designing a coordinated attack that will get both your bombers and your missiles. And that's a problem that doesn't go away.

Do you follow that? Did I do that right? Amazing. Yeah, I think applause is justified tonight. It would be a small achievement on some other evening. The point being that Scowcroft actually simply stripped away the veil of the window of vulnerability since that had been the major point that he had been making all of this time. He then went on to say, so the MX is not because of the window of vulnerability. Forget

that. That was just a mistake. You know. Like the missile gap. Very like the missile gap of 20 years earlier. People have been saying that for some years, by the way, and Reagan had been saying it was treasonous to suggest that there was anything wrong with that reasoning. And as Scowcroft now said, no, it's all right to put them in Minuteman silos because the system as a whole is not that vulnerable. The MX themselves of course, are vulnerable, that part of it. But the bombers will survive.

On the launch on warning the... Another, by the way... One way that comes in, since we are going through this reasoning, is this. Another reason given for the MX. When the president is talking to the public, you'll find---any president---he almost never mentions the relevance of one of these weapons to a U.S. first strike. Right? (If you have counter examples please pass them in on that point.) Weapons are sold to the U.S. public on the grounds that they are somehow related to U.S. retaliation to a Soviet first strike. Except in fairly esoteric... Like the Scowcroft Report---which is addressed to Congress, really, not to the public. Fairly technical publication. We are talking to the public.

So how is the MX supposed to do anything for us in terms of deterrence? Well, the president had already said that it's not very survivable. I'm sorry, looking at the Carter Administration as well, they had to say that it was survivable in its mobile mode. But still, why was it needed in addition to everything else we had?

Well, I don't think they thought it was needed, in fact. I don't think that Harold Brown or Jimmy Carter ever thought the MX was needed. But what they did think was that it was time for them to sign on to the

MX in the face of the pressure they were getting from Reagan, from Nitze, from the Committee for Present Danger, in view of election and what not. And they had to have a reason for it. So the reason they gave was that... In responding to a Soviet attack the MX in their version, now, was not vulnerable, OK? In the short run at least. Mobile, many aiming points, the Soviets couldn't cover it, or couldn't find it—whichever scheme they were using. So the MX in theory was survivable. Like the D-5 submarine which would be survivable. So what good is it, you know, since you can't threaten it very well?

Answer. The Soviets would launch their first salvo at the Minuteman that they could hit. The MX would then be used to hit the hardened silos. What good is that? Well, there would be some that hadn't yet fired. There would be the reserve—the residual force that the Soviets were withholding to threaten us with. And there were "second loads" that might be coming in that you would destroy by this way. So it was called "Second Strike Damage Limiting." You would get, in particular, that part of the Soviet force that had not yet been launched and thereby destroy their bargaining power that Nitze was worried about. Destroy their ability to threaten you with great megatonnage. Follow that?

A problem with that was that the usual inhibitions against going on launch on warning (for fear of false alarm) don't apply to a power that has just launched a first strike. If it's kept a residual force it really can afford, in effect, to take quite seriously radar warning of a retaliatory strike coming at it. And if the U.S. now possesses missiles that can threaten those residual forces the question is raised, why



wouldn't they launch their residual forces on warning whatever targets that they were worth if you attacked them? In fact, does not the existence of the MX (which threatens those residual forces which otherwise would be under no threat—they couldn't be attacked) does not the existence of the MX in fact, encourage the Soviets to put those residual forces on launch on warning, and to launch them at the remaining targets when they see the MX coming at them? The remaining targets would presumably be the cities that they hadn't hit yet. Wouldn't the use of the MX and even the existence of the MX guarantee, then, that your cities got hit, not just your forces?

Well, they seem like very picky questions, maybe. But there is no good answer to that. The fact is that the idea that the MX has the ability to get those other forces is not very valid. There would be no reason for them still to be in their silos when the MX missiles arrive. OK? Yeah?

Q:

Yeah, on the way over here, I haven't even really read the whole story I just saw the headline. Have you seen this evening headline? OK. It's late news here. "Tankers bombed in Iran port." As I say I haven't read the whole story but it's something I've been worrying about for some time in a very intense way. Let me talk about possibilities. My intent here is not just to scare you. Think of it as hypothetical. It could happen. Just to illustrate some of the points we've been talking about.

I think this situation is far more dangerous than it would have been 10 years ago for all the reasons I have been talking about tonight. And to generalize from that a situation like this one which I'll describe in a minute, will be, I believe, more dangerous five years from now than it is tonight. That's the direction in which we are moving in at least a couple of major ways.

First of all here's what we have. Iraq almost four years ago, attacks a country with every reason to believe in a quick victory. Attacks Iran. It is, I would say, the clearest case of aggression, naked, unadorned aggression, that I can actually think of. Unprovoked aggression in the postwar period. If the Soviet moves into Hungary, Czechoslovakia, say it's quite comparable. It didn't lead to war. No more legitimate, but did occur within a fairly well recognized sphere of influence at that point. Which is not to apologize for them. But did have the cover, by the way, a good deal of cover of Warsaw Pact involvements and being asked in by various regimes and so forth.

Here was a clear case of moving across an international boundary—national border—with armed forces. Very clear aggression. Condemned essentially by no one which suggested rather strongly to me that the concept of aggression as a legal concept had eroded so far there was real question as to whether it remained an operational concept in international affairs. Everybody was down on Iran at that point—nearly everybody. So hardly anybody spoke. The Arabs on the whole applauded this. Certainly we weren't worried by it. The Russians didn't say much about it.

As I say they had every reason to believe the Iranians would break up quickly. Soon after the Khoumani regime had come in most of their air force officers, it seemed, had been imprisoned or killed. The army command in general had been killed. The army was being run in a very amateurish way, it was believed. But the Iranians didn't back down. The war didn't end like all the other wars of the last ten years. Vietnam goes into Cambodia. Tanzania goes into Uganda, even that one doesn't have amazing success. China raids into Vietnam gets a bloody nose. Russia into Afghanistan, still fighting. Most of these places still fighting. In every case reason to believe the other side would back down. Everybody wrong. It is not only Americans who make that mistake about their Third World opponents. It seems Russians do it. Socialists do it. Vietnamese do it. It crosses race. Islamic fundamentalists do it as in Iraq. So the war goes on.

Five years from now one or both of such parties. In fact one or both of these very nations may have nuclear weapons. And the assumption that the opponent would be afraid to use those nuclear weapons or that the attacker would be reluctant to use them is not one I want to bet the northern hemisphere on.

At this point you may have noticed by the way that city attacks began just a matter of weeks ago during this very course. For some time Iraq has been threatening to cut Iran's oil by hitting its facilities at Carg Island, the transportation facilities—shipping facilities. This would cut Iran's ability to ship oil, it's major source of income, its foreign exchange. Iran has said that Iraq says that that would be simply in



repayment of the fact that Iran has cut off Iraq's ability to get its oil out. Iraq is strongly moved to do this for two reasons. First of all because it's one of the few ways it can really hurt Iran in this war. And second, because it's a very good way to bring the western powers overtly into the war against Iran. How would that happen?

Because Iran has said that in response to losing their ability to ship oil out and their ability to gain income and keep the war going in this way they would respond (since they could no longer ship oil) by closing the straits of Homuz through which most of the Persian Gulf oil goes to Europe and to Japan. The United States has said (since the Carter Doctrine of 1980) that if the Straits of Homuz were closed we would use any means necessary to reopen them.

It is not clear how Iran (as I understand it) it is not quite clear how Iran would try to close the Straits of Homuz. They could try to sink tankers in the way but it's a long channel. It's fairly deep. It's fairly wide, even though it's relatively narrow at that point. I think it's (somebody may know this area much better) I think it's something like 25 miles. There may be parts of it that would be easy to close. They could try to mine it. We have a good deal of mine sweeping capability. It's not clear that they could do this. However there is a means they could use that would be very effective. And that's simply to attack tankers in the Straits of Homuz which by itself would drive insurance rates up so high that tankers would simply refuse to go. In other words, by making it a war zone, which they can do with their air force they could effectively block the straits from being used without physically blocking.

The United States has stationed enormous force in the Indian Ocean and the region of the Persian Gulf with fairly evident intent to retaliate to Iran. And I think with our recent history of relations with Iran (which is not really enormously different from our long history with the people of Iran) but our recent history with the government of Iran (which is a new phase of our relation) the likelihood is then that we would use that occasion (which might happen like tomorrow or next week) to destroy the Iranian air force. Which no doubt would have some influence on the war with Iraq, and maybe more than that. And we might do a lot more than that to be thoroughly deterrent. We haven't spelled out I mean plausible reasons. They say, you know, we won't say exactly what we will do.

It's clear that our attitude toward the government of Iran is such that we are capable of fairly heavy "punitive acts" if they take this action in the Strait of Homuz. Perhaps going further in joining the war to help the Iraqis in their effort to overthrow the Iranian regime. That is a situation in which the Iranians could turn to the Soviets for help. They are not rushing to do that in the current circumstances. They are regarding the Russians as almost as representative of the great Satan as the U.S. But that could change. The relations are not good.

By the way I hear on the news that as of now the Russian attitude is rather similar to ours. That they are rather sympathetic to the Iraqis in this situation because they fear the appeal of Khoumani to the Sheite Moslems in Russia where they have many millions. And they fear Islamic fundamentalism just as the other Suni regimes in the Middle East do. So

they would be glad to see Iran change in government. But under these circumstances if Iran asked for help it seems to be assumed that they might get it. Don't listen to me as though I'm an expert in this area. I'm just learning about it, reading about it now. So take this as a scenario, if you like, of the way the world works. This is my understanding of how experts see it.

Then the situation could get quite interesting. If the U.S. (as they used to say at Rand) if the U.S. is now fighting Iranians, essentially, along with the Iraqis, and the Soviets are now giving not only material aid to the Iranians, but possibly air defence, possibly some kind of air, the Iranians just having lost their air. Perhaps just bases for Iranian airplanes. We could be fighting Soviets in Iran.

You don't have... This particular scenario is not necessary for that to arise. A month ago it looked not unlikely at all that our retaliation against Syrians and Russian-manned surface-to-air missiles in Lebanon and possibly in Syria, could bring us into direct conflict with Soviets there had not the Marines been brought out. And my impression is that it was not by real presidential leadership that the Marines were brought out. That the risk of that situation was reduced by a very timely operation of our democratic process in which the public, acting through Congress, really brought heavy pressure to bear to reduce our commitment of prestige and honor to Lebanon, which would have been the basis for heavy retaliation against Syria.

This situation again is one that could bring about direct conflict between the U.S. and Russia. If it doesn't do that, if the Russians



don't get into it at all, it still has the seeds for a heavy involvement in Iran itself. How much will we limit our ambitions and the pressures we put on Iran. We have put troops there with the willingness... We put troop ships there, we put all kinds of ships loaded with airplanes and nuclear weapons. This is the kind of situation in which U.S. troops, if we had reinforced in Lebanon, as seemed not impossible, if we had reinforced in Lebanon, no matter how much we reinforced it was obvious that we could be outnumbered. Not by Russians, but by seven or eight different factions in Lebanon and very easily by the Syrians who are allies and clients of the Soviet Union.

Again, Iran is not an ally of the Soviet Union at this point. But if we get heavily involved in Iran which I would say is not impossible. And let's just imagine it. We could easily be outnumbered. We would be obviously much more efficient troops than the Iranians man for man. And better armed, more technically equipped in every respect. It is also obvious from the Iraqi war that that is not the last word in who wins tactical battles. And the willingness of the Iranians to die for Khoumani, for their faith... And notice the peculiar effect it has on the payoffs here. If you are led to believe and do believe that dying is preferable to living under some circumstances, and that nothing is better than going to heaven in this particular cause in mass—in large numbers—it makes very effective threats in military operations.

In those circumstances we might bring (in the past, at least) we have been prepared to threaten nuclear weapons. All the more if Soviet troops were involved. In other words, modern, well-equipped troops the use of

possible tactical nuclear weapons. Well short of that, operations of very large conventional weapons could become involved. Mass destruction weapons of different kinds short of nuclear. Michael Clair has used the term "sub-nuclear weapons"—it's a Pentagon term in fact—meaning weapons that have virtually the effect of small nuclear weapons as area destruction weapons which are available now

CHANGE IN TAPE SIDE

...so the war could get very large. I want to suggest just one last possibility that could arise.

If the Soviets wanted to crack NATO—and by the way I think this is not likely with the new Soviet regime at this particular moment. And in that sense it may be a blessing that in this particular year of the Reagan Administration the Soviets have a new leadership and probably are not ready to take very aggressive commitments.

On the other hand, Andropov did not look extraordinarily aggressive as Russian leaders go. And I believe had committed himself fairly strongly in such a way that the current situation would be more dangerous than it is, I suspect, if Andropov were in strong leadership of the country—given the commitments he had made. Supposing the Pershings had gone in and he had now lost his bid to keep them out. If Andropov wanted (and let's imagine Andropov were still in) if Andropov had wanted to bring very heavy pressure to bear on NATO, all he would have to do is let a crisis like this evolve.

Europe would then find itself for the first time since the Cuban missile crisis (and one could even say the Berlin crisis of '61—I'd say the Cuban crisis) in a situation in which the world was facing a serious prospect of combat between U.S. and Soviet forces. Unlike Cuba, like Berlin—in a circumstance where the Soviet forces were in a more favorable position, closer to their own borders, more easily reinforced, more air support—those are situations in which U.S. threats of first use of nuclear weapons invoked by the Carter Doctrine would at least be relevant. They would be immediately... It could be invoked.

For the last four or five years now the Europeans have been focussed on a problem that Americans have not been too conscious of—the possibility that a war would occur between the Soviet Union and the U.S. somewhere in the world and transfer itself to Europe. That's a problem I find people in American very unfamiliar with as a possibility. Very much on the minds of Europeans. And it turns out with pretty good reason. They would have reason to believe that the American military assets in Europe might get used in such a conflict against Russians and thereby become target for Russian counteractions of various kinds. And that is how Europeans imagine that a war might actually come to pass in Europe. That is the most likely way they see it. And in relative terms that's quite realistic, I think. As I say, not too familiar to Americans.

Americans may be aware that CIA and other estimators have never thought that there was much chance of a war arising in Europe originally that would lead to an allout European war. They have not thought, for instance that the Soviets would strike out of the blue. That leads



most Americans to imagine that there is no way, really, for the war to get started.

The Europeans have increasingly worried about the prospect that war could get started by one side or the other. One or the other taking action in Europe in response to actions that have taken place outside Europe. And that is a realistic possibility. They have become focused on that, as I say, very much in the last few years. And they have been made aware that the Pershings in particular constitute priority targets in such a war for the Soviets. Constitute in effect lightning rods for attack if there were danger of such a war escalating.

If the Soviets then, saw this evolving, I'm afraid they would be tempted to feel (if they were capable of taking significant risks) to feel that they had some advantage in letting NATO go to pieces over this new U.S.-Soviet crisis; occurring in a world in which everyone is well aware the Soviets are now much less likely to back down than they were twenty years ago. The Soviets might hope they could control the risks of this. Just let it stew and let the European publics inform their leaderships what they thought of being locked to what they see as a very erratic, ideological, ill-informed, ignorant leader (which was Reagan) in a conflict with the Soviets (whom they may not trust much more—especially not knowing the leadership).

And fearing that their own fate is thus in the hands of these two uncontrolled and unaccountable super power leaderships. I think the effect of that on the cohesion of NATO would be disastrous to NATO from the point of view of NATO. That's an incentive that I would prefer the

Soviets weren't tempted by. But that's the nature of our situation right now. I don't think the Soviets will, in fact, try to exploit such a situation. With all its advantages the risks for such a confrontation would be very great for them. And I don't think they want it.

Especially now. I don't think it's ruled out. And I think we are moving into a world in which that tactic is more available—is becoming more available, will be more available five years from now—than it is now.

It is a product of our continued reliance on first use threats and our definition of national interests which leads to commitments by a president (even such as Carter) that we will use any means necessary to protect those threats. It is a product of pursuing any means necessary in a world in which almost no means are effective [other?] than a threat of instability.

The Bleckman article (which I very much recommend to you) on the Middle East (which is on the assigned reading, and I assigned it because I think it very much repays reading) reveals that a very similar threat situation arose in 1973, where the Russians proposed to us that we put in joint forces to separate the forces (you could imagine their doing that now—the Iran-Iraq forces) but proposed in any case, that we put in forces to separate the forces of the Israelis and Egyptians, at a time when the Israelis were violating a cease fire and surrounding the Egyptian Third Army (something we didn't want to happen, nor did the Soviets want to happen). We wanted to preserve the Sadat Regime.

The Soviets said, "If you don't join us," (which would have given them a role in the negotiations which we wanted to exclude them from) "we

will unilaterally put in forces." And they were making every effort to do so. Maybe they were pretending. But they were pretending in a way that was very credible and it was committing them to do it. We went on world-wide alert. SAC apparently went to a DEFCON II—the level just below actual war. The highest level (at least that's known) since the Cuban Missile Crisis.

And as Bleckman points out, the meaning of that was to say (and we accompanied that with a message) that we would not permit them to do that—we would fight them on the ground if they did that. That means that in 1973 (before we had Minuteman 3, before the Soviets had SS-18 Mod 4, a time when there was full parity and in which attack by either side could in no way have diminished the other side's attack) we were indicating that we were prepared to take steps which could have led to nuclear war, and which might have gone all the way. Therefore we had to prepare by going on alert.

And as Bleckman points out, you will see in that article, the Russians backed down. But they backed down in part because at the same time the Israelis (under our pressure) did cease to surround the Third Army. What if we had failed to achieve that? Or what if the Israelis had gone around the Third Army and had tried to annihilate it (which was a possibility)? Apparently nobody thought that through. But Bleckman concludes from interviews that Nixon was prepared—I should say the White House Executive Branch was prepared—to put in ground forces. The 82nd Airborne was on alert. To fight the Russians. And we would have been fighting the Russians in that area. Over what?



According to the interviews the issue was our strong determination to exclude the Soviets from any formal role in the Middle East, which may be pointed out is closer to their geographic borders than it is to ours, considerably, but from which traditionally (since the Second World War) we have excluded them.

Maybe I can sum up the hypothesis in a lot of the lectures so far in the following way. You will not go far wrong in predicting retrospectively (and explaining and patterning) U.S. behavior in our strategic buildup throughout that entire period, by the conjecture (it may just be an empirical pattern) the conjecture that there has been no higher objective than to exclude the Soviet Union from a direct role influencing the countries of the Middle East, and the trade of Middle East oil, and any influence over... I am not saying that that is the only purpose by any means—I'm just saying there is an interesting correspondence.

And I think it is one factor which the '73 crisis suggests—that the way of doing that, in part (since that is a place where we cannot hope to overpower Soviet forces or Soviet-supplied forces by our own forces in that area).... We have always maintained (earlier covertly, and now since Carter, overtly) a threat to initiate nuclear operations if we were in danger of being overpowered—or if our allies were.

In this case Egypt was, in effect, being treated as our ally (without a formal alliance, by the way). Just as (if we went into the Iran-Iraq situation) it would be without a single ally in the situation. So our Mx, etc. or our Minuteman, is not related only to our allies. It is also

the interests in places where we don't have a lot of allies. And in particular in this situation. And if, as I say, the Israelis had continued—which seemed quite possible, if the Russians had come in—the risks were not merely bluffs. They were not hollow, they were real risks in '73. And small as they may be this week, I don't think they are zero.

Well, I promised in four minutes to say what I think should be done. You are kind to me in my weakened condition. You haven't rebelled. I'll tell you what I think should be done.

Whatever the reasons for the programs that have been proposed in the Carter Administration and in the Reagan Administration that are currently under way, every single one of them either reduces the stability of the nuclear balance and increases the likelihood of nuclear war, or, in the case of the Cruise missile, has disastrous effects on the future of arms control because of the effects on verification problems.

The Cruise missile may be, above all, a weapon against arms control in that it may make the possibility of reliable verification infeasible over the matter of a few years. And that may be, in fact, one of the reasons why some of its advocates have pushed it as much as they have. In the case of the MX—especially in fixed silos—but even without it, the D-5 with its silo-busting effects, the Trident D-5 (which again does not call for an attack on itself, because it can't be attacked) but by the threat that it poses to Soviet missiles, encourage the Soviets to hit what they can hit before they lose their missiles. So it, too, is destabilizing, although not as much as the MX. The neutron bomb, which is a weapon for first use tactically. Again, it cannot survive enemy

nuclear attack, it is only for initiating nuclear attack. What else? The Pershing. The Pershing, above all, which I've described enough. None of these should exist.

The B-1 is probably the most harmless of all these. It's pretty much a harmless waste of 20 billion dollars. Let's have that. You know, if Cranston is for it, how can I be against it? It's not a good... We should not have the B-1 either, actually. Cranston has not helped his cause by demonstrating his inability to go against the unions and business in California by going against the B-1. Every president up 'till Reagan has managed to cancel the B-1 or the B-70.

OK. There should be no MX, no neutron bomb, no Cruise missile, no Pershing, no B-1. None of these weapons should be bought. Several of them, as I've said, make the...

Why not? Because I believe the policy they serve (which is a policy of first use) is a policy which has catastrophic risks for humanity and that policy should be... I'm not going to argue for this, I'll just assert it at this point since I was asked what I would do. I would say that I agree with the... I won't draw on authority here, but I'm glad to see that the Catholic bishops have taken this as a focus. I think they give it appropriate emphasis—that the first use policy, as they put it, is morally catastrophic. But they point to the fact that that is so, in particular, because of the risks that it poses—which are unacceptable risks to the world.

If we acknowledge that nuclear weapons are for what most Americans have always thought they were for (incorrectly from the point of view of



the administration), namely to deter nuclear attack, not to deter other situations. If we accept the notion as the bishops have put it that non nuclear challenges must be met by non nuclear means, and if we can't do that, or it doesn't seem worthwhile to do that, we must constrict our notion of what our vital interests are in those respects. But not pretend, or prepare, or become a country ready, and prepared, and risking initiation of nuclear war. Then none of these weapons are necessary. And all are dangerous by keeping the arms race going.

And even those that do not directly destabilize the balance (like the B-1 perhaps, like the Cruise missile to some extent) to keep the arms race going for such weapons almost assures proliferation into other hands—like those of Iran, Iraq, Lybia—to joining Israel and South Africa and so forth, who will be using them if we don't stop that process by all means available to us (other than nuclear weapons—in conventional war) will be undoubtedly imitating the behavior of the super powers before very long. So we could do without all those weapons if our purpose was only to deter nuclear attack. And we would better deter nuclear attack—ininitely better—without those weapons.

That means that it would be worth foregoing them whatever the Soviets did. However the Soviet weapons are also destabilizing, though the combination of the two is far more destabilizing. So in short I would, indeed, be willing to forego all those weapons—forgo those weapons unilaterally. That's not unilateral disarmament. These are foregoing weapons that make the situation riskier for us whatever the Soviets do.

But I don't think that's the best way to do it. I would, in fact, propose to the Soviets a freeze. Meaning not that current weapons are

frozen forever at present levels. That is not acceptable. The risks are too high already. But that current levels be taken as the ceiling. Right now. And that there be no additions. That any reductions not be accompanied by new weapons, as in the notion of build down, or as in Salk II, or as in any of President Reagan's proposals. And the reductions should (for reasons that are suggested to me by analyses of this sort, that I was trying to do earlier) reductions should take place first in the most destabilizing weapons—which would include the merved accurate weapons.

The Soviets should get rid of the SS-17, 18, 19—their merved accurate weapons now. The U.S. should get rid—not only forego the MX—but get rid of its advanced Minuteman 3s, in fact all of its Minuteman 3s. Which interestingly would leave both sides with about equal numbers—4 to 5 hundred of single warhead missiles. Not highly accurate and not constituting a threat against each other. A far more stable situation than at present. Have to do other things about submarine missiles. But that would be a program to begin with.

No first use. And that obviously has implications for conventional weapons. I won't go into that now. But no first use. Foregoing all of these new weapons so as to keep open the possibility for arms control and to reject the destabilization of these new...

There's a menu for you. We need a new president to do it, I think. And a new Congress. And maybe a new public.